



07-14-04

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Docket No. 9138-0092US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: LaBelle et al.

Serial No.: 10/658,541

Filing Date: September 8, 2003

Title: Nanoengineered Biophotonic Hybrid Device

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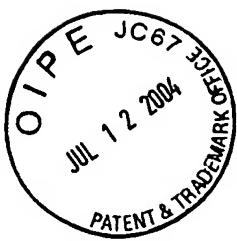
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

on

7/12/2004  
Date

Suzanne Shields  
Suzanne Shields

GALLAGHER & KENNEDY, P.A.  
2575 East Camelback Road  
Phoenix, Arizona 85016-9255  
Tel. No. (602) 530-8000  
Fax. No. (602) 530-8500



Attorney Docket No. 9138-0092US

PATENT

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

## INFORMATION DISCLOSURE STATEMENT

**Commissioner for Patents  
PO Box 1450  
Alexandria, VA 22313-1450**

Dear Sir:

Pursuant to 37 C.F.R. Section 1.97 - 1.99, the Applicant wishes to make the following references of record in the above-identified application. This Information Disclosure Statement is in compliance with the continuing duty of candor as set forth in 37 C.F.R. Section 1.56. These references are also listed on the enclosed PTO Form 1449 and copies are enclosed.

In the judgment of the undersigned, portions of the listed references may be material to the Examiner's consideration of the presently pending claims. However, the references have not been reviewed in sufficient detail to make any other representation and, in particular, no representation is intended as to the relative relevance between references, whether cited in this or prior statements. This statement is not a representation that the listed references have effective dates early enough to be "prior art" within the meaning of 35 U.S.C. Section 102 or Section 103.

This Information Disclosure Statement is being filed:

- within three months of the filing date of a national application; within three months of the date of entry into the national stage as set forth in 37 C.F.R. § 1.491 in an international application; or before the mailing date of a first Office Action on the merits. 37 C.F.R. §1.97 (b)
- after three months of the filing date of a national application, or the date of entry into the national stage as set forth in 37 C.F.R. § 1.491 in an international application; or after the mailing date of a first Office Action on the merits, but before the mailing date of a Final Action under 37 C.F.R. § 1.113 or a Notice of Allowance under 37 C.F.R. § 1.311 (whichever occurs first), and includes (37 C.F.R. § 1.97 (c):
  - the Certification under 37 C.F.R. § 1.97(e) (see "Certification" below)

**OR**

- the fee of \$240 set forth in 37 C.F.R. § 1.17(p) (see "Fees" below).
- after a Final Action under 37 C.F.R. § 1.113 or a Notice of Allowance under 37 C.F.R. § 1.311 (whichever occurs first), but before, or simultaneously with, the payment of the issue fee, and includes the Certification under 37 C.F.R. § 1.97(e) (see "Certification" below), and the Petition Fee set forth in 37 C.F.R. § 1.17(i) (see "Fees" and "Method of Payment of Fees" below). Applicants hereby petitions for consideration of the Information Disclosure Statement submitted herewith and the accompanying references in examination of the subject patent application.

**CERTIFICATION**

- The **undersigned** hereby certifies that each item of information contained in the Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign patent application not more than three months prior to the filing of the Information Disclosure Statement.
- The **undersigned** hereby certifies that no item of information contained in the Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign patent application or, to the knowledge of the person signing the certification after making reasonable inquiry, was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of the Information Disclosure Statement.

**FEES**

- No fee is owed by the applicant(s).
- The IDS Fee of \$240.00 under 37 C.F.R. § 1.17(p) is enclosed herewith.

The Petition Fee of \$130.00 set forth in 37 C.F.R. § 1.17(i) is enclosed herewith.

**METHOD OF PAYMENT OF FEES**

Attached is a check in the amount of \$ .

Charge Deposit Account No. \_\_\_\_\_ in the amount of \$ . (A duplicate copy of this communication is enclosed for that purpose.)

In accordance with MPEP Sections 609 and 707.05(b), it is requested the document cited be given thorough consideration and that it be cited of record in the prosecution history of the present application by initialing on Form PTO-1449. Such initialing is requested even if the Examiner does not consider a cited document to be sufficiently pertinent to use in a rejection, or otherwise does not consider it to be prior art for any reason, or even if the Examiner does not believe that the guidelines for citation have been fully complied with. This is requested so that each document becomes listed on the face of the patent issuing on the present application.

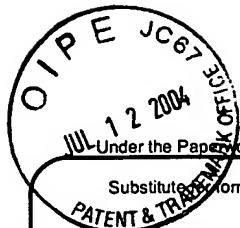
Respectfully Submitted,

Date: 07/12/04



By: Thomas D. MacBlain  
Reg. No. 24,583

Gallagher & Kennedy, P.A.  
2575 East Camelback Road  
Phoenix, Arizona 85016-9225  
Tel No. (602) 530-8088  
Fax No. (602) 530-8500



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Substituted Form 1449/PTO

## INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 1

of 5

**Complete if Known**

Application Number	10/658,541
Filing Date	09/08/2003
First Named Inventor	LaBelle et al.
Art Unit	1645
Examiner Name	Kosson, Rosanne

Attorney Docket Number 9138-0092US

**U. S. PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code <sup>2</sup> (if known)			
1.	US- 3,935,031		01/27/1976	Adler	
2.	US- 4,103,064		07/25/1978	McAlear et al.	
3.	US- 4,149,902		04/17/1979	Mauer et al.	
4.	US- 4,190,950		03/04/1980	Skotheim	
5.	US- 5,466,301		11/14/1995	Hammerbacker et al.	
6.	US- 5,504,573		04/02/1996	Cheiky-Zelina	
7.	US- 5,573,909		11/12/1996	Singer et al.	
8.	US- 5,711,915		01/27/1998	Siegmund et al.	
9.	US- 5,976,892		11/02/1999	Bisconte	
10	US- 6,079,415		06/27/2000	Bernerd et al.	
11	US- 6,342,389		01/29/2002	Cubicciotti	
12	US- 6,476,312		11/05/2002	Barnham	
13	US- 6,538,191		03/25/2003	MacDonald	
14	US- 6,603,069		08/05/2003	Muhs et al.	
	US-				

**FOREIGN PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T <sup>6</sup>
		Country Code <sup>3</sup> -Number <sup>4</sup> -Kind Code <sup>5</sup> (if known)				

Examiner Signature		Date Considered	
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\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup>Applicant's unique citation designation number (optional). <sup>2</sup>See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup>Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup>For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup>Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup>Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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Sheet	2	of	5	Attorney Docket Number	
9138-0092US					

NON PATENT LITERATURE DOCUMENTS					
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	15	ANDERSON, B.B. et al. "Grating Light Reflection Spectroscopy for Determination of Bulk Refractive Index and Absorbance" Anal. Chem. 1996, 68, 1081-1088.			
	16	BORREGO, C.M. et al. "Light intensity effects on pigment compositon and organisation in.. " Photosynthesis Research 59; 159-166, 1999, Kluwer Academic Publishers, Netherlands.			
	17	BUNCE, J.A. "Acclimatin to temperature of the response of photosynthesis to increased ..." Photosynthesis Research 64; 89-94, 2000, Kluwer Academic Publishers, Netherlands.			
	18	CEDENO, C.C. et al. "Nanoimprint lithography for organic electronics" Microelectronic Enginnering 61-62, 2002 25-31.			
	19	DRAGOMAN, D. et al. "Optical modelling of quantum dots" Optics Communications 150, 1998, 331-338.			
	20	FENDLER, J.H. "Self-assembled nanostructured materials" Chem. Mater. 1996, 8, 1616-1624.			
	21	FOIDL, M. et al. "PHototrophic growth and chlorosome formation in Chloroflexus ..." Photosynthesis Research 54, 219-226, 1997, Kluwer Academic Publishers, Netherlands.			
	22	GILARDI, G. et al. "Manipulating redox systems: applicatin to nanotechnology" TRENDS in Biotechnology Vol. 19 No. 11, Nov. 2001.			
	23	GREEN, M.A. "Prospects for photovoltaic efficiency enhancement using low-dimensional structures" Nanotechnology 11, 2000, 401-405, printed in the UK.			
	24	HALL, D.J. "An experimental approach to the dynamics of a natural population of Daphnia Galeata Mendotae" Ecology, Vol. 45, 1, Jan. 1964, 94-112.			

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Substitute for form 1449/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  <i>(Use as many sheets as necessary)</i>		<b>Complete if Known</b>	
		Application Number	10/658,541
		Filing Date	09/08/2003
		First Named Inventor	LaBelle et al.
		Art Unit	1645
		Examiner Name	Kosson, Rosanne
Sheet	3	of	5
		Attorney Docket Number	9138-0092US

<b>NON PATENT LITERATURE DOCUMENTS</b>				
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.		T <sup>2</sup>
	25	HE, J. et al. "Structure and optical properties of self-assembled InAs/GaAs quantum dots with..." Journal of Crystal Growth 240, 2002, 395-400.		
	26	HE, Jin-An et al. "Bacteriorhodopsin thin film assemblies - immobilization, properties and applications" Adv. Mater. 1999, 11, No. 6, 435-446.		
	27	INOUE, N. et al. "Effects of high-temperature treatments on a thermophilic Cyanobacterium Synechococcus vulcanus" Plant Cell Physiol. 41(4); 515-522 (2000).		
	28	KOTI, A.S.R. et al. "Self-Assembly of Template-Directed J-Aggregates of Porphyrin" Chemistry of Materials Vol. 15 No. 2, Jan. 28, 2003.		
	29	MURAMATSU, K. et al. "Two-Dimensional Assemblies of Colloidal SiO <sub>2</sub> and TiO <sub>2</sub> Particles Prepared by the ..." Journal of Colloid and Interface Science 242, 127-132 (2001).		
	30	MARUYAMA, T. et al. "Energy conversion efficiency of solar cells coated with fluorescent coloring agent" Solar Energy Materials & Solar Cells 56 (1998) 1-6.		
	31	MARUYAMA, T. et al. "Wedge-shaped light concentrator using total internal reflection" Solar Energy Materials & Solar Cells 57 (1999) 75-83.		
	32	NARAYAN, K.S. et al. "Dual function hybrid polymer-nanoparticle devices" Applied Physics Letters Vol. 74 No. 6, 8 February 1999.		
	33	OLIVE, J. et al. "Ultrastructure and light adaptation of phycobilisome mutants of Synechocystis PCC 6803" Biochimica et Biophysica Acta 1319 (1997) 275-282.		
	34	PELED, A. et al. "Photobleaching and photodeposition in a chlorophyll based solution" Synthetic Metals 115 (2000) 167-171.		

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	35	PLANNER, A. et al. "The influence of rigid matrices on the processes of deactivation of excited ..." Jurnal of PHotochemistry and Photobiology A: Chemistry 115 (1998) 151-155	
	36	RASMUSSEN, K.O. et al. "Nonlinear and stochastic modelling of energy transfer in Scheibe aggregates" Mathematics and Computers in simulation 40 (1996) 339-358.	
	37	SANCHEZ-CORTES, S. et al. "Influence of coverage in the surface-enchanced Raman scattering of cytosine and its methyl derivatives on ..." Surface Science 473 (2001) 133-142.	
	38	SAWICKI, D.A. et al. "Universal relationship between optical emission and absorption of complex systems: an alternative approach" Physical Review A, Vol. 54 No.6, December 19	
	39	SCHMIDT, K.A. et al. "Combined fluorescence and photovoltage studies on ... Photosynthesis Research 58; 43-55, 1998, Kluwer Academic Publishers, Printed in the Netherlands.	
	40	SOMMELING, P.M. et al. "Spectral response and IV-characterizatin of dye-sensitized nanocrystalline TiO <sub>2</sub> solar cells" Solar Energy Materials & Solar Cells 62 (2000) 399-410.	
	41	STANGL, R. et al. "On the modeling of the dye-sensitized solar cell" Solar Energy Materials and Solar Cells 54 (1998) 255-265.	
	42	UMETSU, M. et al. "How the formation process influences the structure of ..." Photosynthesis Research 60; 229-239, 1999 Kluwer Academic Publishers, Printed in the Netherlands.	
	43	WAGNER, J. et al. "Characterization of Monodisperse Colloidal Particles: Comparison between SAXS and DLS" Langmuir 2000, 16, 4080-4085.	
	44	WEETALL, H.H. et al. "Optical and electrical characteristics of bacteriorhodopsin gelatin films and tin-oxide coated electrodes" Current Applied Physics 3 (2003) 281-291.	

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	45	YANG, T. et al. "Creating Addressable Aqueous Microcompartments above Solid Supported Phospholipid Bilayers Using Lithographically ..." Anal. Chem. 2000, 72, 2587-2589.			
	46	Tamiaki, H. et al "Aggregation of synthetic metallochlorins in hexane. A model of chlorosomal bacteriochlorophyll self-assemblies..." Photosynthesis Research 59-67, 2002.			

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